CORAL REEF ECOLOGY

Concepts
Coral reef community

HCPS III Benchmarks
SC 4.5.2
SC 4.5.3

Duration
45 minutes

Source Material
PRISM
MARE

Vocabulary
Carnivores
Community
Coral Reef
Decomposers
Herbivores
Omnivores
Producers

KWL Chart and Background Article

Summary

Students will work cooperatively and ask questions about coral reef organisms.

Objectives

- Students will identify the difference between factual and fictional statements about the organisms that live in a coral reef community.
- Students will understand and use vocabulary pertaining to a coral reef community.

Materials (one per student)

KWL worksheet
Background article
Notebook or blank paper

Making Connections

The students have learned about coral polyps and will now dive into the ecological community that surrounds these coral colonies. They will form questions and statements about what they know about coral reef communities based on prior personal experiences or observations.

Teacher Prep for Activity

Draw a KWL chart on the board and photocopy one background article and KWL worksheet per student.

Background

See background article below.

Procedure

1. Begin by passing out one KWL worksheet and background article to each student.
2. Ask the students what they know about the types of organisms that live in coral reefs. Write their responses under the "K" section of the chart on the board. Ask the students to fill in the "K" section of their own KWL worksheet.
3. Next, ask the students what they would like to know about coral reef organisms. Write their responses under the "W" section of the KWL chart on the board. Have the students fill in the "W" section of their KWL worksheet.
4. Read the background article out loud with the class.
5. Break the students up into groups, assign each group one paragraph, and ask the students to focus their attention on

only that one paragraph, read it again very carefully, and take notes on the main points.

6. When each of the groups have finished, ask one member of the group to share their notes with the rest of the class.
7. To end, lead a class discussion addressing each of the questions or items listed under the "W" section of the KWL on the board.

NOTE: The students will come back to the KWL charts later on in the unit and complete the "L" section. Collect the worksheets or have the students keep them in a safe place.

Assessments

Complete "K & W" sections of the KWL worksheet
Participation in group activity and discussion

Resources

Circle of Life. February 2005. Navigating Change: Land to Sea Connection. Bishop Museum. Website: www.hawaiianatolls.org/teachers/curriculum/final/WebUnit2.pdf

Circle of Life: Background Article on Coral Reef Organisms

Coral reefs are complex communities of plants and animals. The colonies of corals that grow next to and on top of each other form the basis for this fascinating community, providing food, shelter, and living spaces for many kinds of plants and animals. One way to understand the complex relationships among the plants and animals in this ecosystem is to examine the individual roles that different species play in the **coral reef community**.

Corals are unique. They play a dual role as producers and carnivores. The **producers** are the basis of the food chain, providing food for the **herbivores**, such as the turtles and colorful parrotfish that live on the reef. The producers in the coral community also include the microscopic phytoplankton and larger algae that use the energy from sunlight to convert water and carbon dioxide into sugar in the process of photosynthesis. **Carnivores**, such as moray eels, monk seals, and sharks prey on the herbivores, which helps to keep these population in balance. Darting among the corals are many beautifully colored fish that have adapted to feed on both plants and animals. These **omnivores** include the moorish idol, reef triggerfish, and the raccoon butterflyfish. Finally, the coral community would not be complete without the creatures that make up nature's cleaning crew. These **decomposers** include the crabs and lobsters that scavenge for food, feeding on decaying plants and animals.

KWL CHART

What you know about the organisms that live in coral reefs	What you want to know about the organisms that live in coral reefs	What you learned about the organisms that live in coral reefs